

# **Bogalusa Mill Mill Production Start-up Plan**

## **Introduction**

A plan has been developed that will allow Temple-Inland to re-start production operations at the Bogalusa Mill (here after referred to as “the Mill”) while ensuring protection of the health of the Pearl River and the safety of the community. The plan includes provisions for improved capability to manage upsets, provides additional layers of monitoring and reporting with detailed notification protocols, and includes equipment additions to improve collection and reprocessing of waste streams. The improvements in these areas will ensure the future health and protection of the Pearl River and the community.

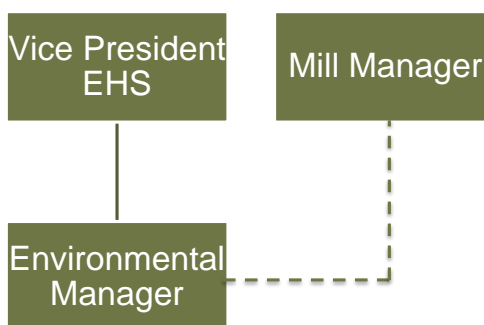
## **Organizational Changes**

The current management positions in the Mill are under review. Appropriate personnel actions will take place to ensure that we have the best leadership in the key operating positions in the mill. These leadership positions, including the Mill Manager, will be required to complete additional Environmental Health and Safety (EHS) training and certification. Additionally, the Environmental Manager of the Mill will now report directly to the corporate EHS Vice President with dotted-lined reporting to the Mill Manager. The chart below illustrates the reporting structure that is in place.

### **PRIOR REPORTING STRUCTURE**



### **NEW REPORTING STRUCTURE**



The Mill will also form a Community Advisory Committee which will meet monthly to facilitate two way communication on issues important to citizens of the local parishes. The Mill representatives will include the Mill Manager, Environmental Manager and Human Resources Manager; community representatives will include local officials and community leaders.

In order to verify that the new organization and process improvements are being done, we will utilize third party consultants to perform audits of our systems.

### **Process Changes**

Process improvements will include increased monitoring and collection of material for re-processing. Additional tank capacity (approximately 3,100,000 gallons) will be available for spill collection by using an existing production tank until a new tank can be built. The increased monitoring includes:

- Increasing the number of diversion/collection sumps to a total of 8 locations.
- Provide redundant conductivity monitors at each of the 8 diversion sumps.
- Provide local alarm light for conductivity monitoring sumps.
- Provide real time data to mill monitoring and control system of status of diversion sump pumps, conductivity data and alarms.
- Continuous monitoring of the pH and conductivity at the clarifier, which is the input to the Aerated Stabilization Basin (ASB).

These monitoring points and tanks are show in Attachment 1.

### **Notification Changes**

The data collected will be reported to multiple layers of site and corporate management. Trigger points for actions to be taken in response to this new monitoring are in place.

Prevention of losses and containment of materials at the source is the best way to maintain consistent and reliable operations. To this end the mill has developed a tiered approach to monitoring and reacting to process changes. In general there are four levels of action to be taken by the operator depending on what process is being monitored.

- Lower Action Level – Process is adjusted and communicated by the operators. Key inputs and outputs to the process are adjusted to bring the process back into the normal range. Operator notifies supervisor.
- Hi Action Level – Aggressive action taken by operator that includes slowing down production, communication to management, implementation of surge

capacity and notification to other process areas that could be impacted. Supervisor notifies Superintendent.

- Hi-Hi Action level – Preparation to shut down processes are initiated – no authorization required – operators initiate shutdown immediately. Communication within mill and corporate management occurs. Superintendent notifies Environmental Manager, Mill Manger and VP EHS.
- Shutdown Level – Aggressive corrective action taken, process is shutdown, communications are initiated and diversion is made. Superintendent notifies Environmental Manager, Mill Manger and VP EHS.

The initial action levels are built from available data in the mill from the first half of 2011. The triggers were established using the average plus a standard deviation factor. These levels may be updated in the future if there is a statistical change in either the average or standard deviations as long as no adverse impacts on the ASB have been observed. For areas with new monitoring, similar methods will be used for developing their control charts once a minimum of three months of data are available. In the interim, trigger levels may be based on tank levels in the area or based on process knowledge.

In addition, if the action tiers at the clarifier for pH and conductivity both trigger a Hi-Hi level, then additional sampling will be performed and notification to DEQ and local officials will be provided.

The Mill Manager will be required to perform regular observation and monitoring visits to the treatment plant and river. Results of these visits will be reported in the mill daily summary report that is submitted each morning to corporate leaders.

## **Standard Operating Procedures and Training**

Each production process has SOP(s) associated with its operation. There are over seventy standard operating procedures related to production processes that have been modified to incorporate environmental and wastewater monitoring considerations. The appropriate mill personnel will be trained to incorporate these responsibilities into their day to day routine.

## **Protection of the Pearl River**

In order to ensure protection of the health of the Pearl River, if the clarifier conductivity and pH data are both at a Hi-Hi Action Level then the following additional river and ASB monitoring will be conducted:

- Upstream and downstream testing of the Pearl River for DO and pH
- More frequent predictive sampling and testing of 1-Day BOD and COD on ASB
- Communication of the data results to DEQ, local officials and Temple-Inland Mill site and corporate management

## Near Term Capital Changes

In addition to the organizational, process and equipment changes outlined above, the following capital equipment changes are in process:

- Ash removal system to capture ash for beneficial reuse vs. sending it to the treatment plants (125 tons per day)
- Increase capacity of evaporators by 10% to be able to reprocess recovered materials
- Future new tankage (5,000,000 gallons; 200,000 gallons; 150,000 gallons) - for collecting sewer process materials - (tankage that was converted will return to operational use at that time)

## Start-up Sequence

ASB and Production startup follows a stepwise sequence of activities. Prior to mill start-up, the level in the ASB needs to be dropped to ensure adequate retention time for treatment. The projected timeframe for achieving the desired level in the ASB is summarized in the following table.

Day	Estimated Weir Drop (inches)	Estimated Discharge to River (MGD)	Comments
1	0.6	2	Includes ~1 MGD from cooling water
2	3	6	Includes ~1 MGD from cooling water
3	3.6	11	Includes ~5 MGD for Day 1 of Startup
4	1.8	12	Includes ~9 MGD for Day 2 of Startup
5	No Change	16-20	Return to normal discharge rates

The steps for starting up the mill processes are illustrated in Attachment 2. Please note that times shown are for planning purposes and may be adjusted based on actual process conditions.

## Start-up Monitoring

During the process startup additional monitoring will be conducted within the mill process sewers and wastewater treatment system. In-mill process monitoring is specified in individual SOPs and includes items such as tank levels, pH and conductivity. Action triggers and notifications will be given as discussed previously.

To further protect the Pearl River, additional monitoring of the treated wastewater being discharged and the Pearl River will be conducted during the process startup. Based on the proposed timeline shown in Attachment 2, start-up ends when both machines have produced paper. This additional ASB and river monitoring will continue for a period, at which time the mill will return to required compliance monitoring.

The table below identifies the locations and frequencies of the measurements to be monitored, as well as the responsible party. In addition, action levels are shown

where applicable. If the levels shown below are reached, actions up to and including discontinue of discharge will be taken.

### Summary of Proposed Monitoring During Startup Discharges

Test Location	Test	Responsible Party	Current Frequency	Startup Frequency	Action Level
<b>Pearl River<sup>1</sup></b>	DO	EBS <sup>4</sup>	1/Quarter	Every 4 hours <sup>2</sup>	DO measured at <5.0 mg/L
	pH	EBS	1/Quarter	Every 4 hours <sup>2</sup>	NA
	Conductivity	EBS	1/Quarter	Every 4 hours <sup>2</sup>	NA
<b>Outfall</b>	TSS <sup>3</sup>	Mill/EBS	3/week but doing 5/week	5/Week	NA
	pH	Mill/EBS	3/week	Continuous <sup>5</sup>	8.9
	BOD <sub>5</sub>	Mill/EBS	3/week	7/week	NA
	DO	Mill/EBS	NA	Every 4 hours <sup>2</sup>	NA
	DOUR	EBS	2/week	7/week	>6mg/L/hour
	BOD <sub>1</sub>	Mill/EBS	7/week	7/week	NA
	COD	Mill/EBS	7/week	7/week	NA
	Conductivity	Mill/EBS	NA	Every 4 hours <sup>2</sup>	NA
	Microscopic Maturity Index	EBS	1/week	1/week	<1.1
<b>Mid-ASB (East Pond Rainbird)</b>	DOUR	EBS	2/week	7/week	>6mg/L/hour
	Microscopic Maturity Index	EBS	1/week	7/week	<1.1
	Nutrients - p	EBS	1/week	7/week	NA
	Nutrients - N	EBS	1/week	7/week	NA
	pH	EBS	1/week	7/week	NA
	COD	EBS	1/week	7/week	NA
	Conductivity	EBS	1/week	7/week	NA
	DO	EBS	1/week	7/week	NA

1. Locations of Pearl River sampling:

Location	Latitude	Longitude
<b>Below Mouth of Coburn Creek (upstream of outfall, below mouth of Coburn Creek)</b>	30°46.579' N	89°49.752' N
<b>Mill Outfall</b>	30°46.563' N	89°49.681' N
<b>Richardson Landing (~1 mile below outfall)</b>	30°45.751' N	89°49.845' N
<b>Above Walnut Bluff (~4 miles below outfall)</b>	30°43.602' N	89°50.115' N
<b>Above Pools Bluff (~8 miles below outfall)</b>	30°42.531' N	89°50.533' N
<b>Above split in Pearl River (~30 miles below outfall)</b>	30° 34.132' N	89°48.456' N
<b>Walkiah Bluff (~32 miles below outfall)</b>	30°34.223' N	89°47.376' W
<b>I-59 crossing at Pearl River (~49 miles below outfall)</b>	30°23.027' N	89°44.142' N

- Monitoring will only be performed during daylight hours.
- TSS – Total Suspended Solids
- EBS – Environmental Business Specialists, LLC
- Continuous monitor will be in place at the outfall and grab samples will be performed approximately every 4-hours for verification

### Summary of Proposed Reduction in Sampling Frequency

Sampling Continuation (Days after Startup Complete)	Description of frequency Change
<b>1-7</b>	<ul style="list-style-type: none"> <li>Same sampling program as proposed for startup period</li> </ul>
<b>8-14</b>	<ul style="list-style-type: none"> <li>River sampling program reduced to twice per day</li> <li>Outfall sampling program remains the same</li> <li>Mid-Pond sampling program remains the same</li> </ul>
<b>15-21</b>	<ul style="list-style-type: none"> <li>River sampling program reduced to once per day</li> <li>Outfall sampling <ul style="list-style-type: none"> <li>Every 4-hours reduced to every 8-hours</li> <li>Daily and continuous samples remain the same</li> </ul> </li> <li>Mid-Pond sampling not required (continuous pH and conductivity remains in place)</li> </ul>
<b>22-35</b>	<ul style="list-style-type: none"> <li>River sampling frequency reduced to once per week</li> <li>Outfall sampling <ul style="list-style-type: none"> <li>Every 8-hours sampling no longer required</li> <li>Daily samples and continuous monitors remain the same</li> </ul> </li> </ul>
<b>36-84</b>	<ul style="list-style-type: none"> <li>River sampling frequency reduced to once per month</li> <li>Outfall sampling returns to required regulatory monitoring with continuous monitors in place for process control</li> </ul>